

REMARKS

Claims 1-10 are currently pending in this application, as amended. Claim 1 has been amended to more particularly point out and distinctly claim the invention. Support for the amendment to claim 1 can be found in the original claims and in the original specification paragraph [0018]. Claim 4 has been amended to correct a minor grammatical error. Claims 9-10 have been added based upon the original claims and original specification paragraph [0028]. Accordingly, no new matter has been added.

Rejections under 35 U.S.C. § 102(b)

Claims 1, 3-4 and 7-8 have been rejected as being anticipated by U.S. Patent No. 4,231,184 ("Corris *et al.*," hereinafter, "Corris").

Withdrawal of the rejections of claims 1, 3-4 and 7-8 is respectfully requested for at least the following reasons.

Claim 1

Claim 1, as amended, recites, *inter alia*:

a peak integrator electrically coupled to the band-pass filter, the peak integrator being configured to receive the filtered signal, to average amplitude peaks of the filtered signal and to output a trigger signal based on a predetermined range of the averaged filtered signal....
[emphasis added]

Corris fails to disclose or suggest a peak integrator electrically coupled to the band-pass filter, where the peak integrator is configured to receive the filtered signal, to average amplitude peaks of the filtered signal and to output a trigger signal based on a predetermined range of the averaged filtered signal.

Corris discloses a toy doll having a sound detection circuit using a microphone, an amplifier, a band pass filter, a timing circuit and transistors that control motors. But, the timing circuit of Corris is not a peak integrator that controls the output only after receiving a

predetermined range of averaged peaks output from the filter. Amplifier A3 of Corris provides a detected DC signal across resistor R15 and capacitor C4 *in response to* an audio signal received at amplifier A3's non-inverting input (column 4, lines 60-62). Resistor R15 and capacitor C4 are selected so as to have a suitable time constant *for operation of the motors* 32 and 58 (column 4, lines 62-64). Amplifier A4 normally provides a highly positive signal, but provides a signal approaching ground potential *in response to* a detected DC signal across capacitor C4 (column 5, lines 3-6). In particular, the output of amplifier A4 drops to nearly ground potential *in response to* an audio signal (column 5, lines 19-21). Because of the time constant provided by capacitor C4 and resistor R15, the motor remains on for about two seconds (column 5, lines 22-24). Thus, the combination of amplifiers A3, A4, resistor R15 and capacitor C4 responds immediately to a detected audible signal in a pre-selected range output from a bandpass filter amplifier A2 and the timing circuit (resistor R15 and capacitor C4) determines how long the control output will drive the motor(s) 38 and 58. This combination audio detection circuit fails to average peaks of the filtered signal and to output a trigger signal based on a predetermined range of *such an averaged signal* as required by the claims of the present invention.

A claim is anticipated under 35 U.S.C. § 102 only if each and every element as set forth in the claim is found expressly or inherently described in a single prior art reference and the elements must be arranged as required in the claim. MPEP § 2131. Corris fails to disclose a peak integrator that is configured to receive the filtered signal, to average peaks of the filtered signal and to output a trigger signal based on a predetermined range of the averaged filter signal, and therefore, Corris fails to disclose or suggest each and every element of claim 1 and of dependent claims 3-4 and 7-8. It is therefore, respectfully submitted, that independent claim 1 is not anticipated by Corris. Accordingly, it is respectfully requested that the rejection of independent claim 1 and dependent claims 3-4 and 7-8 under 35 U.S.C. § 102(b) be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-2 Rejection

Claims 1-2 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,394,656 ("Goettsche") and U.S. Patent No. 5,501,131 ("Hata").

Withdrawal of the rejections of claims 1-2 is respectfully requested in view of the foregoing amendment and for at least the following reasons.

Claim 1

Claim 1, as amended, recites, *inter alia*:

a controller electrically coupled to the peak integrator, the controller being configured to receive the trigger signal and to provide a control output in response to the trigger signal, the control output having a frequency unrelated to the filtered signal.

Goettsche, or Goettsche modified by Hata, each fails to disclose or suggest a control circuit having a controller configured to receive a trigger signal and to provide a control output wherein the control output has a frequency unrelated to the filtered signal.

Goettsche discloses an apparatus for displaying the frequency spectrum of an audio signal received from a standard stereophonic amplifier by using a plurality of bandpass filters 16, 18, 19 to divide the signal into a plurality of separate signals having distinct and non-overlapping frequency ranges in order to drive lights 50, 51, 52 representing each distinct separate signal (column 2, lines 14-30 and 43-47 and column 3, lines 31-32), so as to control the lights in response to the frequency characteristics and intensity (i.e., average energy) of the distinct frequency ranges of the detected audio signal. Hata fails to compensate for the deficiencies of Goettsche. Hata discloses a decorative light blinking control circuit that responds to an input from an audio source or a microphone and uses a phase lock loop (PLL) circuit and a filter to cause lights to flash in response to the frequency characteristics of the detected audio signal. Thus, both Goettsche and Hata generate an output that tracks the input, although somewhat delayed in time.

However, there is no clear teaching in either Goettsche or Hata of a sound responsive having a controller configured to receive a trigger signal and to provide a control output wherein the control output has a frequency unrelated to the filtered signal.

To establish *prima facie* obviousness of a claimed invention, all the claimed limitations must be taught or suggested by the prior art. MPEP § 2143.03. Further, to support

the conclusion that the claimed invention is directed to obvious subject matter, either the reference must expressly or implicitly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to be obvious in light of the teachings of the references. MPEP § 2143.01.

Even if Goettsche were modified to include the microphone/sound detection circuit of Hata, the modified Goettsche device would still not disclose each and every element of claims 1-2. Thus, all of the claimed elements of claims 1-2 are not disclosed by the modified Goettsche device. Applicant therefore respectfully submits that claims 1-2 are not obvious under 35 U.S.C. § 103(a) in view of the combination of Goettsche and Hata. Accordingly, Applicant respectfully requests that the rejection of claims 1-2 under 35 U.S.C. § 103(a) be withdrawn.

Claims 5-6 Rejection

Claims 5-6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Corris and U.S. Patent No. 4,973,286 ("Davison").

Withdrawal of the rejections of claims 5-6 is respectfully requested for at least the following reasons.

Claims 5-6

Claims 5-6 depend from independent claim 1.

Corris, or Corris modified by Davison, each fails to disclose or suggest a peak integrator electrically coupled to the band-pass filter, where the peak integrator is configured to receive the filtered signal, to average peaks of the filtered signal and to output a trigger signal based on a predetermined range of the averaged filter signal.

As mentioned above, Corris discloses a toy doll having a sound detection circuit using a microphone, an amplifier, a band pass filter, a timing circuit and transistors that control motors. But, the timing circuit of Corris is not a peak integrator that controls the output only after receiving a predetermined range of averaged peaks output from the filter. The combination

of amplifiers A3, A4, resistor R15 and capacitor C4 responds immediately to a detected audible signal in a pre-selected range output from a bandpass filter amplifier A2 and the timing circuit (resistor R15 and capacitor C4) determines how long the control output will drive the motor(s) 38 and 58. This combination audio detection circuit fails to average peaks of the filtered signal and to output a trigger signal based on a predetermined range of *such an averaged signal* as required by the claims of the present invention. Corris fails to disclose a peak integrator that is configured to receive the filtered signal, to average peaks of the filtered signal and to output a trigger signal based on a predetermined range of the averaged filter signal, and therefore, Corris fails to disclose or suggest each and every element of claims 5 or 6.

Davison fails to compensate for the deficiencies of Corris. Davison discloses a crib toy including a microphone, a filter a one-shot trigger and a timer controller that drives a motor and/or a sound generator. The microphone is coupled through a capacitor 121 and potentiometer 122 (together forming a filter) to the base electrode 127 of a transistor (the one-shot trigger) (column 8, lines 18-30). The transistor remains inactive until the signal from microphone 100 exceeds a bias voltage (column 8, lines 64-67). But, Davison lacks a peak integrator that averages peaks of the filtered signal and outputs a trigger signal based on a predetermined range of the averaged signal.

Even if Corris were modified to include the “shaking rattle” of Davison, as suggested by the Examiner, the modified Corris device would still not disclose each and every element of claims 5-6. Thus, all of the claimed elements of claims 5-6 are not disclosed by the modified Corris device. Applicant therefore respectfully submits that claims 5-6 are not obvious under 35 U.S.C. § 103(a) in view of the combination of Corris and Davison. Accordingly, Applicant respectfully requests that the rejection of claims 5-6 under 35 U.S.C. § 103(a) be withdrawn.

New Claims

Claims 9-10 have been added based upon the original claims and original specification paragraph [0028]. Accordingly, no new matter is added.

None of the references cited by the Examiner discloses or suggests a control circuit having a sound detector configured to detect audible sound signals; a band-pass filter electrically coupled to the sound detector; a peak integrator electrically coupled to the band-pass filter; and a controller electrically coupled to the peak integrator and to the sound detection circuit, wherein the controller disables the sound detection circuit for a predetermined period of time after receiving the trigger signal.

Further, none of the references cited by the Examiner discloses or suggests a control circuit having a sound detector configured to detect audible sound signals; a band-pass filter electrically coupled to the sound detector; a peak integrator electrically coupled to the band-pass filter; and a controller electrically coupled to the peak integrator and configured to control a light, a motor and a sound output device in response to receiving the trigger signal.

CONCLUSION

In view of the foregoing Amendments and Remarks, it is respectfully submitted that the present application, including claims 1-10, is in condition of allowance and such action is respectfully requested.

Respectfully submitted,

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